Amendments to the Claims

The listing of claims will replace all prior versions, and listings of claims in the application.

1.   *(presently amended)* A method of interfacing between one or more requestors and one or more airline availability information sources, comprising

querying one or more airline availability information sources for airline availability information;

receiving the requested airline availability information from the one or more airline availability information sources;

caching the received airline availability information;

receiving queries from requestors for airline availability information;

prioritizing the requestor queries;

processing the requestor queries in accordance with the associated priorities;

determining to provide the requestors with at least one of real-time airline availability information and cached airline availability information based at least in part on one or more factors associated with <u>one or more of</u> the requestors, the requestor queries, the requested airline availability information, and[[/or]] the airline availability information sources; and

providing information to the requestors in accordance with the determining.

2.   *(previously presented)* The method according to claim 1, further comprising:

   monitoring airline availability information traffic between an airline availability information source and one or more clients of the airline availability information source; and

   caching at least a portion of the monitored airline availability information.

3.   *(previously presented)* The method according to claim 1, further comprising:

   proactively generating one or more queries independent of requestor queries; and

   sending the one or more proactively generated queries to an airline availability information source and caching information returned therefrom.

4.   *(previously presented)* The method according to claim 1, further comprising:

   monitoring airline availability information traffic between an airline availability information source and one or more clients of the airline availability information source;

   caching at least a portion of the monitored airline availability information;

   proactively generating one or more queries independent of requestor queries; and

   sending the one or more proactively generated queries to an airline availability information source and caching information returned therefrom.

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5.   *(previously presented)* The method according to claim 3, further comprising:

adding the requestor queries to a query priority queue;

adding proactively generated queries to the query priority queue, at

lower priorities than the requestor queries; and

processing the requestor queries and the proactively generated queries

according to their priorities.

6.   *(previously presented)* The method according to claim 5, wherein the adding

of the requestor queries step comprises:

separating a first requestor query into one or more sub-queries;

prioritizing the one or more first requestor sub-queries with respect to

one another;

placing the one or more first requestor sub-queries in the query priority

queue;

separating a second requestor query into one or more sub-queries;

prioritizing the one or more second requestor sub-queries with respect

to one another; and

placing the one or more second requestor sub-queries in the query

priority queue, ordering the first requestor sub-queries with respect to the

second requestor sub-queries according to associated times of receipt,

resolving priority disputes between simultaneously received first and second

requestor queries so that higher priority sub-queries of the first and second

requestors are processed before lower priority sub-queries of the first and second requestors.

7.   *(previously presented)* The method according to claim 3, wherein the proactively generating step comprises proactively generating queries to populate cache.

8.   *(previously presented)* The method according to claim 3, wherein the proactively generating step comprises proactively generating queries to update cached information.

9.   *(previously presented)* The method according to claim 3, wherein the proactively generating step comprises ordering the proactive queries for processing based on time-to-departures and age of associated cached information.

10.   *(presently amended)* The method according to claim 9, wherein the proactively generating step further comprises:

        generating a plurality of storage buckets in a memory;

        associating at least a portion of the buckets with various time-to-departures;

        ordering the buckets according at least to their associated time-of-departures;

        bucketing the proactive queries according at least to their associated time-to-departures;

ordering the proactive queries within the buckets at least according to

ages of previously cached <u>information</u> ~~data~~ associated with the proactive

queries;

re-bucketing the proactive queries as their associated time-to-

departures change; and

selecting a bucket for processing according to the ordering of the

buckets, and processing the proactive queries within the selected bucket,

skipping proactive queries for which information is presently cached and

newer than a predetermined age.

11. *(previously presented)* The method according to claim 10, wherein:

the associating step comprises associating the buckets with various

time-to-departures and according to one or more modes of transportation; and

the ordering of the buckets step comprises ordering the buckets

according to the nearness to time-of-departures and the associated modes of

transportation.

12. *(previously presented)* The method according to claim 10, further comprising:

adding the requestor queries to a query priority queue;

adding proactively generated queries from buckets selected in

accordance with the selecting step to the query priority queue at lower

priorities than the requestor queries; and

processing the requestor queries and the proactively generated queries

in the query priority queue according to their priorities.

13.   *(previously presented)* The method according to claim 12, wherein the adding

of the requestor queries step comprises:

      separating a first requestor query into one or more sub-queries;

      prioritizing the one or more first requestor sub-queries with respect to

one another;

      placing the one or more first requestor sub-queries in the query priority

queue;

      separating a second requestor query into one or more sub-queries;

      prioritizing the one or more second requestor sub-queries with respect

to one another; and

      placing the one or more second requestor sub-queries in the query

priority queue, ordering the first requestor sub-queries with respect to the

second requestor sub-queries according to associated times of receipt,

resolving priority disputes between simultaneously received first and second

requestor queries so that higher priority sub-queries of the first and second

requestor are processed before lower priority sub-queries of the first and

second requestor.

14.   *(presently amended)* The method according to claim 1, wherein:

      the receiving of requestor queries step comprises receiving a requestor

preference for <u>at least one of</u> real-time information and[[/or]] cached

information; and

the determining step comprises determining to provide the

corresponding requestor with <u>at least one of</u> real-time information and[[/or]]

cached information based at least in part on the requestor preference.

15.   *(presently amended)* The method according to claim 1, wherein the

determining step comprises determining to provide a requestor with <u>one or</u>

<u>more of</u> real-time information and[[/or]] cached information based at least in

part on one or more of the following factors:

        an availability of requested information in cache[[;]]<u>,</u>

        a currently cached flight availability count[[;]]<u>,</u>

        a requestor preference for cached <u>information</u> ~~and/or realtime data~~[[;]]<u>,</u>

        <u>a requestor preference for realtime information,</u>

        an age of the cached information[[;]]<u>,</u>

        a requestor identification ~~and/or requestor importance factor~~[[;]]<u>,</u>

        <u>a requestor importance factor,</u>

        a time of day[[;]]<u>,</u>

        a proxy availability[[;]]<u>,</u>

        availability of recently cached information[[;]]<u>,</u>

        one or more rules associated with an information source[[;]]<u>,</u>

        an activity/load at a realtime information source[[;]]<u>,</u>

        anticipated turn around time to an information source[[;]]<u>,</u>

        total number of seats[[;]]<u>,</u>

        a nearness to time-to-departure[[;]]<u>,</u>

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a market importance[[;]].

a frequency of prior availability changes[[;]], and

a mode of transportation.

16. *(previously presented)* The method according to claim 1, further comprising:

querying one or more information sources through one or more

proxies.

17. *(previously presented)* The method according to claim 16, wherein the

querying through one or more proxies step comprises:

monitoring an operational status of the one or more proxies and

selecting proxies for querying based on the monitored operational status.

18. *(previously presented)* The method according to claim 16, wherein the

querying through one or more proxies step comprises:

monitoring response times for the one or more proxies and selecting

proxies for querying based at least on the response times.

19. *(previously presented)* The method according to claim 16, wherein the

querying through one or more proxies step comprises:

maintaining a list of unsupported suppliers for which information is

not available on the one or more information sources; and

returning queries for information from the unsupported suppliers

without querying an information source.

20.   *(previously presented)* The method according to claim 16, wherein the querying through one or more proxies step comprises:

maintaining proxy records for available proxies in a proxy queue; and

removing a higher priority proxy record from the proxy queue to process a query.

21.   *(previously presented)* The method according to claim 20, wherein the maintaining of proxy records step comprises maintaining the proxy queue as part of a query priority queue.

22.   *(presently amended)* The method according to claim 1, wherein the receiving of requestor queries step comprises receiving a request for one or more of the following additional types of information:

hotel availability information[[;]],

rental car availability information[[;]],

taxi availability information[[;]],

entertainment availability information[[;]], and

restaurant availability information;

wherein the prioritizing, the processing, the determining, and the providing steps are performed for the one or more additional types of information.

23.   *(presently amended)* The method according to claim 14, wherein the receiving

of a requestor preference step comprises permitting a requestor to select one of

the following options:

   return real-time information data only[[;]],

   return cached information data only[[;]],

   return cached information data if available, otherwise consult a real-

time data information source[[;]], and

   return cached information data if the cached information data is less

than N seconds old, where N is real number, otherwise consult [[a]] the real-

time data information source.

24.   *(presently amended)* The method according to claim 14, wherein the receiving

of a requestor preference step comprises permitting a requestor to select and

prioritize a plurality of the following options:

   return real-time information data only[[;]],

   return cached information data only[[;]],

   return cached information data if available, otherwise consult a real-

time data information source[[;]], and

   return cached information data if the cached information data is less

than N seconds old, where N is real number, otherwise consult the real-time

data information source.

25.   *(presently amended)* The method according to claim 1, further comprising:

      caching recently updated information separately from less recently updated information and searching the recently updated cached information when real-time information ~~data~~ is sought.

26.   *(previously presented)* The method according to claim 1, further comprising:

      permitting a requestor to specify approximate departure times in the requests for airline availability information; and

      searching a cache for requested information.

27.   *(presently amended)* The method according to claim 26, wherein the searching a cache step comprises:

      rounding-up actual departure times for flights, providing at least the rounded-up actual departure times to a hashing function, and storing information associated with the flights in a hash table based on resulting rounded-up hash table indexes; ~~and~~

      rounding-down actual departure times for each flight, providing at least the rounded-down actual departure times to the hashing function, and storing information associated with the flights in the hash table based on resulting rounded-down hash table indexes;

      rounding-up a requestor-specified departure time, providing the rounded-up requestor-specified departure time to the hash function, and searching the hash table based on a resulting hash table index; and

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rounding-down the requestor-specified departure time, providing the rounded-down requestor-specified departure time to the hash function, and searching the hash table based on a resulting hash table index.

28.   *(previously presented)* The method according to claim 1, further comprising:

initiating a control thread for a query, whereby the query includes one or more sub-queries;

initiating a worker thread for each sub-query associated with the query;

prioritizing the worker threads with respect to one another; and

processing the worker threads according to associated priorities.

29.   *(previously presented)* The method according to claim 1, further comprising sharing a flight availability count record between a plurality of flight records stored in a cache.

30.   *(previously presented)* The method according to claim 1, further comprising:

associating multiple flight records as married flight records in a cache; and

sharing a flight availability count record between at least one of the multiple flight records and another flight record in the cache.

31.   *(previously presented)* The method according to claim 1, wherein the providing step comprises searching for cached information after waiting a pre-determined time for real-time information.

32.   *(previously presented)* The method according to claim 1, further comprising:

communicating with at least a portion of the one or more information

sources through proxies, whereby the proxies interface with the at least a

portion of the one or more of the information sources using information source

specific codes.

33.   *(presently amended)* The method according to claim 32, wherein the

communicating step comprises:

measuring one or more response characteristics associated with the

proxies;

prioritizing the proxies according to the ~~performance~~ <u>response</u>

<u>characteristics</u> measurements; and

maintaining a proxy priority queue, whereby queries are passed to

higher priority proxies.

34.   *(previously presented)* The method according to claim 32, wherein the

communicating step comprises:

identifying one or more information sources that proxies cannot

communicate with; and

filtering out queries directed to the identified information sources.

35. *(previously presented)* The method according to claim 32, wherein the communicating step comprises:

    monitoring an operational status of the proxies; and

    optimizing use of the proxies based on the operational status of the proxies.

36. *(previously presented)* The method according to claim 32, further comprising:

    simulating replies from the proxies.

37. *(previously presented)* The method according to claim 3, wherein the sending step comprises sending the one or more proactively generated queries during periods of low information source activity.

38. *(previously presented)* The method according to claim 3, wherein the proactively generating step comprises generating background threads that pose queries that appear to come from requestors.

39. *(previously presented)* The method according to claim 3, wherein the proactively generating step comprises filtering one or more queries out of proactive caching.

40. *(previously presented)* The method according to claim 39, wherein the filtering step comprises filtering out queries related to airline flights for which fares are not available.

41. *(previously presented)* The method according to claim 39, wherein the filtering step comprises filtering out queries related to flights on unsupported carriers.

42. *(previously presented)* The method according to claim 39, wherein the filtering step comprises filtering out queries related to flights that users are not expected to request.

43. *(previously presented)* The method according to claim 3, wherein the proactively generating step comprises assigning priority to queries according to an associated market.

44. *(previously presented)* The method according to claim 3, wherein the proactively generating step comprises assigning priorities to queries according to a frequency of flights.

45. *(previously presented)* The method according to claim 3, wherein the proactively generating step comprises assigning priorities to queries according to a frequency of changes associated with availability of corresponding flights.

46. *(previously presented)* The method according to claim 3, wherein the proactively generating step comprises assigning priority to queries according to a market importance.

47.   *(previously presented)* The method according to claim 3, wherein the proactively generating step comprises assigning priority to queries according to nearness of departure time.

48.   *(presently amended)* The method according to claim 3, wherein the proactively generating step comprises assigning priority to queries according to an age of cached <u>information</u> ~~data~~.

49.   *(previously presented)* The method according to claim 3, wherein the proactively generating step comprises assigning priority to queries according to a number of remaining available seats.

50.   *(previously presented)* The method according to claim 3, wherein the proactively generating step comprises assigning priority to queries according to anticipated increases in travel volume.

51.   *(presently amended)* The method according to claim 3, wherein the proactively generating step comprises assigning priority to queries according to <u>at least one of</u> a type of <u>a</u> product~~/service~~ <u>and a type of a service</u>.

52.   *(previously presented)* The method according to claim 3, wherein the proactively generating step comprises assigning lower priority to forms of ground transportation.

53.   *(previously presented)* The method according to claim 3, wherein the proactively generating step comprises assigning lower priority to flights that use propeller planes.

54.   *(previously presented)* The method according to claim 3, wherein the proactively generating step comprises assigning priority according to a total number of available seats.

55.   *(previously presented)* The method according to claim 3, wherein the proactively generating step comprises updating cached airline availability information according to multiple priorities.

56.   *(previously presented)* The method according to claim 55, wherein the proactively generating step further comprises encoding the multiple priorities into a mathematical function that assigns a combined priority value to units of cached airline availability information, and updating the cached airline availability information according to the associated combined priority values.

57.   *(previously presented)* The method according to claim 55, wherein the proactively generating step further comprises:

        prioritizing the cached airline availability information according to departure times;

        prioritizing the cached airline availability information according to one or more additional features; and

updating the cached airline availability information based on a combination of the priorities associated with the departure time and the one or more additional features.

58.   *(previously presented)* The method according to claim 1, further comprising:

predicting an availability status.

59.   *(previously presented)* The method according to claim 58, wherein the predicting step comprises predicting availability status based on prior observed variables, including prior availability information.

60.   *(previously presented)* The method according to claim 59, wherein the predicting step further comprises:

identifying one or more factors associated with availability status;

learning a relationship between historical values for the one or more factors and historical values for availability status;

generating a function according to the learned relationship; and

providing new values for the one or more factors to the function, whereby the function outputs predicted values for availability status.

61.   *(previously presented)* The method according to claim 1, further comprising:

separating a first requestor query into one or more sub-queries;

prioritizing the one or more first requestor sub-queries with respect to one another;

placing the one or more first requestor sub-queries in a query priority

queue;

separating a second requestor query into one or more sub-queries;

prioritizing the one or more second requestor sub-queries with respect

to one another;

placing the one or more second requestor sub-queries in the query

priority queue, ordering the first requestor sub-queries with respect to the

second requestor sub-queries according to associated times of receipt,

resolving priority disputes between simultaneously received first and second

requestor queries so that higher priority sub-queries of the first and second

requestors are processed before lower priority sub-queries of the first and

second requestors; and

processing the queries in the query priority queue according to their

associated priorities.

62. *(presently amended)* The method according to claim 1, further comprising:

monitoring airline availability information traffic between an airline

availability information source and one or more clients of the airline

availability information source;

determining a likelihood that information will be received <u>within a</u>

<u>period of time</u> ~~in a near future~~ by the monitoring;

generating proactive queries for information not likely to be received

<u>within the period of time</u> ~~in the near future~~; and

caching information returned in response to the proactive queries.

63. *(presently amended)* A method of interfacing between one or more requestors and one or more information sources, comprising:

querying one or more information sources <u>for</u> information;

receiving the ~~requested~~ information from the one or more information sources;

caching the received information;

receiving queries from requestors for <u>at least a portion of the</u> information;

prioritizing the requestor queries;

processing the requestor queries in accordance with the associated priorities;

determining to provide the requestors with at least one of real-time ~~airline availability~~ information and cached ~~airline availability~~ information based at least in part on one or more factors associated with <u>one or more of</u> the requestors, the requests, the requested ~~airline availability~~ information, and[[/or]] the <u>one or more</u> ~~airline availability~~ information sources; and

providing information to the requestors in accordance with the determining.

64. *(presently amended)* A computer program product including a computer useable medium having computer program logic stored therein to enable a computer system to interface between one or more requestors and one or more information sources, wherein said computer program logic comprises:

a receiving function that causes the computer system to receive requests for information from information requestors;

a prioritizing function that causes the computer system to prioritize~~ing~~ the requests and to process the requests in accordance with the associated priorities;

a query process function that causes the computer system to determine to process a query, at least, with out-of-cache or with real-time information, based at least in part on one or more factors associated with <u>one or more of</u> the requestors, the requests, the requested ~~airline availability~~ information, and[[/or]] the <u>one or more</u> ~~airline availability~~ information sources;

a query function that causes the computer system to query <u>the</u> one or more information sources when it determines to process a query with real-time information; and

a cache control function that causes the computer system to cache information returned from the one or more information sources.

65. - 139. (*cancelled*)

140. *(presently amended)* A method of interfacing between one or more requestors and one or more airline availability information sources, comprising:

querying one or more airline availability information sources for airline availability information;

receiving the requested airline availability information from the one or more airline availability information sources;

caching the received airline availability information;

receiving queries from requestors for airline availability information;

separating a first requestor query into one or more sub-queries;

prioritizing the one or more first requestor sub-queries with respect to one another;

placing the one or more first requestor sub-queries in a query priority queue;

separating a second requestor query into one or more sub-queries;

prioritizing the one or more second requestor sub-queries with respect to one another;

placing the one or more second requestor sub-queries in the query priority queue, ordering the first requestor sub-queries with respect to the second requestor sub-queries according to associated times of receipt, resolving priority disputes between simultaneously received first and second requestor queries so that higher priority sub-queries of the first and second

requestors are processed before lower priority sub-queries of the first and

second requestors;

> proactively generating one or more queries independent of the

requestor queries;

> adding the proactively generated queries to the query priority queue at

lower priorities than the requestor queries;

> processing the requestor queries and the proactively generated queries

according to their priorities;

> determining to provide the requestors with at least one of the following

types of airline availability information[[;]],

>> real-time information, and

>> cached information;

> providing information to the requestors in accordance with the

determining; and

> sending the one or more proactively generated queries to an airline

availability information source and caching information returned therefrom.

141.   *(presently amended).* A method of interfacing between one or more requestors

and one or more airline availability information sources, comprising:

> querying one or more airline availability information sources for

airline availability information;

> receiving the requested airline availability information from the one or

more airline availability information sources;

caching the received airline availability information;

receiving queries from requestors for airline availability information;

determining to provide the requestors with at least one of the following types of airline availability information[[;]]:

      real-time information, and

      cached information;

providing information to the requestors in accordance with the determining;

proactively generating queries independent of the requestor queries;

generating a plurality of storage buckets in a memory;

associating at least a portion of the buckets with various time-to-departures;

ordering the buckets according at least to their associated time-of-departures;

bucketing the proactive queries according at least to their associated time-to-departures;

ordering the proactive queries within the buckets at least according to ages of previously cached information ~~data~~ associated with the proactive queries;

re-bucketing the proactive queries as their associated time-to-departures change;

selecting a bucket for processing according to the ordering of the buckets and processing the proactive queries within the selected bucket,

skipping proactive queries for which information is presently cached and newer than a predetermined age, wherein the processing includes sending the proactively generated queries to one or more airline availability information sources according to the bucket selecting; and

caching information returned from the proactive queries.

142. *(previously presented)* The method according to claim 141, wherein:

the associating step includes associating the buckets with various time-to-departures and according to one or more modes of transportation; and

the ordering step includes ordering the buckets according to the nearness to time-of-departures and the associated modes of transportation.

143. *(previously presented)* The method according to claim 141, further comprising:

adding the requestor queries to a query priority queue;

adding proactively generated queries from buckets selected in accordance with the selecting, to the query priority queue, at lower priorities than the requestor queries; and

processing the requestor queries and the proactively generated queries in the query priority queue according to their priorities.

144.   *(previously presented)* The method according to claim 143, wherein the adding of requestor queries step comprises:

separating a first requestor query into one or more sub-queries;

prioritizing the one or more first requestor sub-queries with respect to one another;

placing the one or more first requestor sub-queries in the query priority queue;

separating a second requestor query into one or more sub-queries;

prioritizing the one or more second requestor sub-queries with respect to one another; and

placing the one or more second requestor sub-queries in the query priority queue, ordering the first requestor sub-queries with respect to the second requestor sub-queries according to associated times of receipt, resolving priority disputes between simultaneously received first and second requestor queries so that higher priority sub-queries of the first and second requestor are processed before lower priority sub-queries of the first and second requestor.

145. *(presently amended)* A method of interfacing between one or more requestors

and one or more airline availability information sources, comprising:

querying one or more airline availability information sources for

airline availability information;

receiving the requested airline availability information from the one or

more airline availability information sources;

caching the received airline availability information;

receiving queries from requestors for airline availability information;

determining to provide the requestors with at least one of the following

types of airline availability information[[;]]。

real-time information, and

cached information;

providing information to the requestors in accordance with the

determining; and

querying one or more of the information sources through one or more

proxies, including monitoring an operational status of the one or more proxies

and selecting proxies for querying based on the monitored operational status.

146. *(presently amended)* A method of interfacing between one or more requestors and one or more airline availability information sources, comprising:

querying one or more airline availability information sources for airline availability information;

receiving the requested airline availability information from the one or more airline availability information sources;

caching the received airline availability information;

receiving queries from requestors for airline availability information;

determining to provide the requestors with at least one of the following types of airline availability information[[;]]:

real-time information, and

cached information;

providing information to the requestors in accordance with the determining; and

querying one or more of the information sources through one or more proxies, including monitoring response times for the one or more proxies and selecting proxies for querying based at least on the response times.

147.   *(presently amended)* A method of interfacing between one or more requestors

and one or more airline availability information sources, comprising:

     querying one or more airline availability information sources for

airline availability information;

     receiving the requested airline availability information from the one or

more airline availability information sources;

     caching the received airline availability information;

     receiving queries from requestors for airline availability information;

     determining to provide the requestors with at least one of the following

types of airline availability information[[;]],

        real-time information, and

        cached information;

     providing information to the requestors in accordance with the

determining; and

     querying one or more of the information sources through one or more

proxies, including maintaining a list of unsupported suppliers for which

information is not available on the one or more information sources and

returning queries for information from the unsupported suppliers without

querying an information source.

148.   *(presently amended)* A method of interfacing between one or more requestors

and one or more airline availability information sources, comprising:

querying one or more airline availability information sources for

airline availability information;

receiving the requested airline availability information from the one or

more airline availability information sources;

caching the received airline availability information;

receiving queries from requestors for airline availability information;

determining to provide the requestors with at least one of the following

types of airline availability information[[;]]ₐ

real-time information, and

cached information; and

providing information to the requestors in accordance with the

determining; and

querying one or more of the information sources through one or more

proxies, including maintaining proxy records for available proxies in a proxy

queue and removing a higher priority proxy record from the proxy queue to

process a query.

149.   *(previously presented)* The method according to claim 148, further comprising

maintaining the proxy queue as part of a query priority queue.

150. *(presently amended)* A method of interfacing between one or more requestors and one or more airline availability information sources, comprising:

querying one or more airline availability information sources for airline availability information;

receiving the requested airline availability information from the one or more airline availability information sources;

caching the received airline availability information;

receiving queries from requestors for airline availability information;

permitting at least one of the requestors to select one of the following options[[;]],

return real-time information ~~data~~ only,

return cached information ~~data~~ only,

return cached information ~~data~~ if available, otherwise consult a real-time ~~data~~ information source, and

return cached information ~~data~~ if the cached information ~~data~~ is less than N seconds old, where N is real number, otherwise consult [[a]] the real-time ~~data~~ information source;

determining to provide the requestors with at least one of the following types of airline availability information based at least in part on a requestor selected option[[;]],

real-time information, and

cached information; and

providing information to the requestors in accordance with the

determining.

151. *(presently amended)* A method of interfacing between one or more requestors

and one or more airline availability information sources, comprising:

querying one or more airline availability information sources for

airline availability information;

receiving the requested airline availability information from the one or

more airline availability information sources;

caching the received airline availability information;

receiving queries from requestors for the airline availability

information;

permitting at least one of the requestors to select and prioritize a

plurality of the following options[[;]],

return real-time information ~~data~~ only[[;]],

return cached information ~~data~~ only[[;]],

return cached information ~~data~~ if available, otherwise consult a

real-time ~~data~~ information source[[;]], and

return cached information ~~data~~ if the cached information ~~data~~ is

less than N seconds old, where N is real number, otherwise consult the real-

time ~~data~~ information source;

determining to provide the requestors with at least one of the following

types of airline availability information based at least in part on requestor

selected options and prioritizations[[;]].

real-time information, and

cached information; and

providing information to the requestors in accordance with the

determining.

152.   *(presently amended)* A method of interfacing between one or more requestors

and one or more airline availability information sources, comprising:

querying one or more airline availability information sources for

airline availability information;

receiving the requested airline availability information from the one or

more airline availability information sources;

caching the received airline availability information;

receiving a query from a requestor for airline availability information,

wherein the query includes one or more sub-queries;

initiating a control thread for the query[[,]];

initiating a worker thread for each sub-query associated with the query;

prioritizing the worker threads with respect to one another;

processing the worker threads according to the associated priorities;

determining to provide the requestor with at least one of the following

types of airline availability information[[;]].

real-time information, and

cached information; and

providing information to the requestor in accordance with the

determining.

153. *(presently amended)* A method of interfacing between one or more requestors

and one or more airline availability information sources, comprising:

querying one or more airline availability information sources for

airline availability information;

receiving the requested airline availability information from the one or

more airline availability information sources;

caching the received airline availability information;

sharing a flight availability count record between a plurality of cached

flight records;

receiving queries from requestors for airline availability information;

determining to provide the requestors with at least one of the following

types of airline availability information[[;]],

real-time information, and

cached information; and

providing information to the requestors in accordance with the

determining.

154. *(presently amended)* A method of interfacing between one or more requestors and one or more airline availability information sources, comprising:

querying one or more airline availability information sources for airline availability information;

receiving the requested airline availability information from the one or more airline availability information sources;

caching the received airline availability information;

associating multiple flight records as married flight records in the cache;

sharing a flight availability count record between at least one of the multiple flight records and another flight record in the cache;

receiving queries from requestors for airline availability information;

determining to provide the requestors with at least one of the following types of airline availability information[[;]]:

real-time information, and

cached information; and

providing information to the requestors in accordance with the determining.

155. *(presently amended)* A method of interfacing between one or more requestors and one or more airline availability information sources, comprising:

querying one or more airline availability information sources for airline availability information;

receiving the requested airline availability information from the one or more airline availability information sources;

caching the received airline availability information;

receiving queries from requestors for airline availability information;

determining to provide the requestors with at least one of the following types of airline availability information[[;]]ₐ

real-time information, and

cached information;

providing information to the requestors in accordance with the determining; and

searching for cached information after waiting a pre-determined time for real-time information.

156. *(presently amended)* A method of interfacing between one or more requestors

and one or more airline availability information sources, comprising:

querying one or more airline availability information sources for

airline availability information;

receiving the requested airline availability information from the one or

more airline availability information sources;

caching the received airline availability information;

receiving queries from requestors for airline availability information;

determining to provide the requestors with at least one of the following

types of airline availability information[[;]],

real-time information, and

cached information;

providing information to the requestors in accordance with the

determining; and

communicating with at least a portion of the one or more airline

availability information sources through proxies, whereby the proxies

interface with the at least a portion of the one or more airline availability

information sources using airline availability information source specific

codes.

157.   *(presently amended)* The method according to claim 156, wherein the communicating step comprises:

  measuring one or more response characteristics associated with the proxies;

  prioritizing the proxies according to the ~~performance~~ <u>response characteristics</u> measurements; and

  maintaining a proxy priority queue, whereby queries are passed to higher priority proxies.

158.   *(presently amended)* The method according to claim 156, wherein the communicating step comprises:

  identifying one or more <u>airline availability</u> information sources that proxies cannot communicate with; and

  filtering out queries directed to the identified <u>airline availability</u> information sources.

159.   *(previously presented)* The method according to claim 156, wherein the communicating step comprises:

  monitoring an operational status of the proxies; and

  optimizing use of the proxies based on the operational status of the proxies.

160.   *(previously presented)* The method according to claim 156, further comprising simulating replies from the proxies.

161.   *(presently amended)* A method of interfacing between one or more requestors and one or more airline availability information sources, comprising:

querying one or more airline availability information sources for airline availability information;

receiving the requested airline availability information from the one or more airline availability information sources;

caching the received airline availability information;

receiving queries from requestors for airline availability information;

determining to provide the requestors with at least one of the following types of airline availability information[[;]],

real-time information, and

cached information;

providing information to the requestors in accordance with the determining;

proactively generating one or more queries independent of requestor queries, including generating background threads that pose queries that appear to come from requestors; and

sending the one or more proactively generated queries to an airline availability information source and caching information returned therefrom.

162. *(presently amended)* A method of interfacing between one or more requestors and one or more airline availability information sources, comprising:

>querying one or more airline availability information sources for airline availability information;

>receiving the requested airline availability information from the one or more airline availability information sources;

>caching the received airline availability information;

>receiving queries from requestors for airline availability information;

>determining to provide the requestors with at least one of the following types of airline availability information[[;]]:

>>real-time information, and

>>cached information;

>providing information to the requestors in accordance with the determining;

>proactively generating one or more queries independent of requestor queries, including filtering one or more queries out of proactive caching; and

>sending the one or more proactively generated queries to an airline availability information source and caching information returned therefrom.

163. *(previously presented)* The method according to claim 162, wherein the filtering step includes filtering out queries related to airline flights for which fares are not available.

164.   *(previously presented)* The method according to claims 162, wherein the filtering step includes filtering out queries related to flights on unsupported carriers.

165.   *(previously presented)* The method according to claims 162, wherein the filtering step includes filtering out queries related to flights that users are not expected to request.

166.   *(presently amended)* A method of interfacing between one or more requestors and one or more airline availability information sources, comprising:

   querying one or more airline availability information sources for airline availability information;

   receiving the requested airline availability information from the one or more airline availability information sources;

   caching the received airline availability information;

   receiving queries from requestors for airline availability information;

   determining to provide the requestors with at least one of the following types of airline availability information[[;]]$_\lambda$

      real-time information, and

      cached information;

   providing information to the requestors in accordance with the determining;

proactively generating queries independent of requestor queries and assigning priority to the proactively generated queries according to a total number of available seats; and

sending the one or more proactively generated queries to an airline availability information source and caching information returned therefrom.

167. *(presently amended)* A method of interfacing between one or more requestors and one or more airline availability information sources, comprising:

querying one or more airline availability information sources for airline availability information;

receiving the requested airline availability information from the one or more airline availability information sources;

caching the received airline availability information;

receiving queries from requestors for airline availability information;

determining to provide the requestors with at least one of the following types of airline availability information[[;]],

real-time information, and

cached information;

providing information to the requestors in accordance with the determining;

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proactively generating one or more queries independent of requestor

queries, including proactively generating one or more queries to update cached

airline availability information according to multiple priorities; and

sending the one or more proactively generated queries to an airline

availability information source and caching information returned therefrom.

168.   *(previously presented)* The method according to claim 167, wherein the

proactively generating step comprises:

prioritizing the cached airline availability information according to

departure times;

prioritizing the cached airline availability information according to one

or more additional features; and

updating the cached airline availability information based on a

combination of the priorities associated with the departure time and one or

more additional features.

169.   *(presently amended)* A method of interfacing between one or more requestors

and one or more airline availability information sources, comprising:

querying one or more airline availability information sources for

airline availability information;

receiving the requested airline availability information from the one or

more airline availability information sources;

caching the received airline availability information;

receiving queries from requestors for airline availability information;

predicting an availability status based on prior observed variables,

including prior availability information, wherein the predicting includes[[;]],

identifying one or more factors associated with availability

status,

learning a relationship between historical values for the one or

more factors and historical values for availability status,

generating a function according to the learned relationship, and

providing new values for the one or more factors to the

function, whereby the function outputs predicted values for availability status;

determining to provide the requestors with at least one of the following

types of airline availability information[[;]],

real-time information,

cached information, and

predicted information; and

providing information to the requestors in accordance with the

determining.

170.   *(presently amended)* A method of interfacing between one or more requestors

and one or more airline availability information sources, comprising:

querying one or more airline availability information sources for

airline availability information;

receiving the requested airline availability information from the one or

more airline availability information sources;

caching the received airline availability information;

receiving queries from requestors for airline availability information;

separating a first requestor query into one or more sub-queries;

prioritizing the one or more first requestor sub-queries with respect to one another;

placing the one or more first requestor sub-queries in a query priority queue;

separating a second requestor query into one or more sub-queries;

prioritizing the one or more second requestor sub-queries with respect to one another;

placing the one or more second requestor sub-queries in the query priority queue, ordering the first requestor sub-queries with respect to the second requestor sub-queries according to associated times of receipt, resolving priority disputes between simultaneously received first and second requestor queries so that higher priority sub-queries of the first and second requestors are processed before lower priority sub-queries of the first and second requestors;

processing the queries in the query priority queue according to their associated priorities;

determining to provide the requestors with at least one of the following types of airline availability information[[;]]:

real-time information, and

cached information; and

providing information to the requestors in accordance with the

determining.

171. (*presently amended*) A method of interfacing between one or more requestors

and one or more airline availability information sources, comprising:

monitoring airline availability information traffic between an airline

availability information source and one or more clients of the airline

availability information source;

caching at least a portion of the monitored airline availability

information traffic;

determining a likelihood that information will be received <u>within a</u>

<u>period of time</u> ~~in the near future~~ by the monitoring;

generating proactive queries for information not likely to be received

<u>within the period of time</u> ~~in the future~~;

caching information returned in response to the proactive queries;

receiving a queries from requestors for airline availability information;

determining to provide the requestors with at least one of the following

types of airline availability information[[;]]<u>,</u>

real-time information, and

cached information; and

providing information to the requestors in accordance with the

determining.